


Module 5

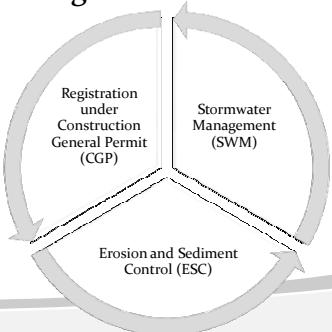
What does this all mean? (Integrating Stormwater Management and ESC)


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Common Issues Between ESC and SWM

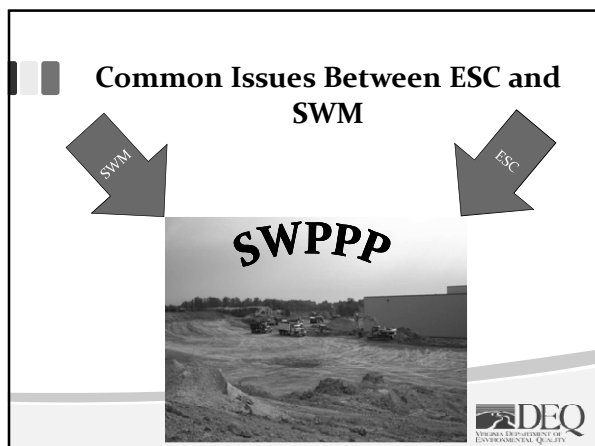

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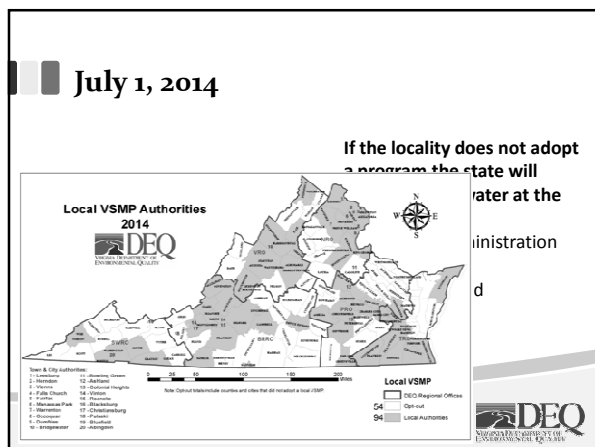
The three parts of construction permitting



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graph TD; A[Registration under Construction General Permit (CGP)] --> B[Stormwater Management (SWM)]; B --> C[Erosion and Sediment Control (ESC)]; C --> A;
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July 1, 2014

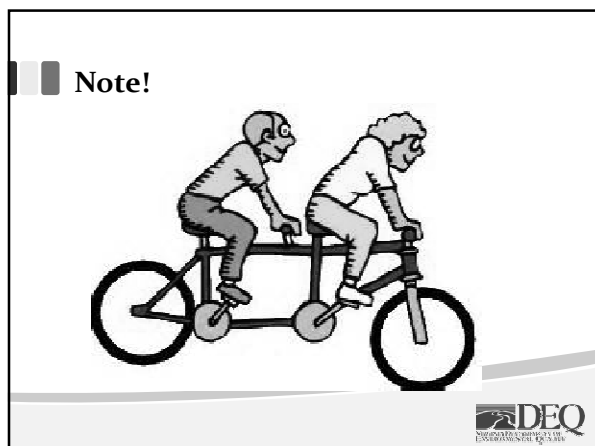
Localities that opted out are not exempt from stormwater management:

- DEQ will administer the program
- DEQ will conduct plan review
- DEQ will conduct VSMP inspections

But:

- Localities are still a VESCP (responsible for ESC program)
- Localities will need to review ESC plans for projects between 10,000 sf and 1 acre for compliance with the energy balance requirements under the VSMP statutes instead of MS-19

DEQ



Two Agreements in Lieu of Plan

= a contract between the plan approving authority and the owner ...

Who is the plan approving authority?

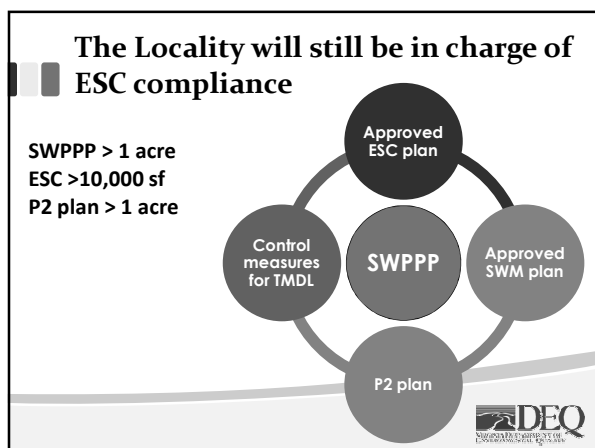
ESC?

→ VESCP (locality)

SWM?

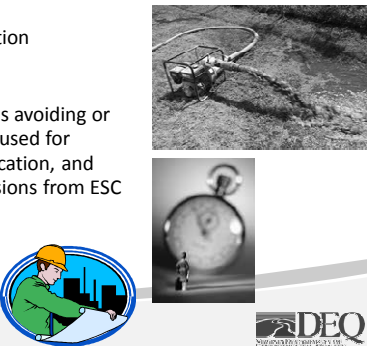
→ VSMP (locality/DEQ)

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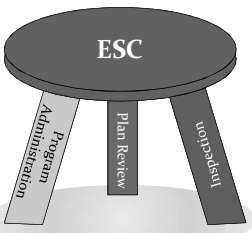
Interaction between ESC and VSMP

1. Pollution Prevention
2. ESC issues such as avoiding or protecting areas used for infiltration, co-location, and timing of conversions from ESC practice to SWM
3. Plan review



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The three legged stool of ESC



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The locality

- Needs to ensure that there is an approved SWMP before issuing a land disturbance permit
- Issue LDP only when Land Disturber shows prove of coverage under the CGP
- Has to option of collecting an ESC bond or surety
- Needs to conduct ESC inspections
- Ensures that final stabilization has been achieved before stormwater BMPs are put on line
- Refunds bonds and sureties

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ESC Program Administration

- Be able to tell clients where and how to submit a SWPPP for approval by DEQ
- Be aware that registration under the CGP and an approved SWPPP is needed in addition to an approved ESC plan before issuance of a Land Disturbance Permit



What is required prior to issuance of Land Disturbance Permit?

- Approved ESC Plan
- Name/number of an RLD
- Evidence of VSMP permit coverage
- Approved SWM plan (SWPPP)
- P2 Plan on file at the site (or available for review)
- Bond/surety



Responsibilities of the Operator

- Operator is responsible for:
 - Implementing approved ESC and SWM plans
 - Implementing and updating P2 plan and any additional control measures to address a TMDL
 - Complying with terms of VSMP authority permit and Construction GP, when applicable





ESC Plan Review
Let's get started!





Plan review in programs that did not adopt a VSMP

- DEQ → ≥ 1 acre (SWM)
- VESCP → 10,000 sqf or 2500 sqf to < 1acre → for SWM
→ >10,000 sqf or >2500 sqf for CBPA → for ESC

MS-19




MS-19

(l.) For projects approved before July 1, 2014, if you can meet the requirements specified for a “super basin” in the stormwater regulations you satisfy MS-19

(m.) Projects approved after July 1, 2014, must comply with the Virginia Stormwater Management Act including the Grandfathering provisions.

(n.) Meeting the requirements of the Virginia Stormwater Management Act satisfies MS-19.

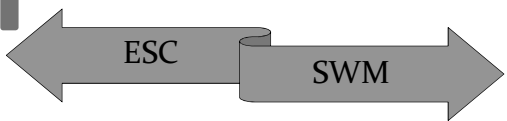





Localities (regardless whether they adopted a VSMP or opted out) now have to review still have to review for projects between 10,000 sq. ft. and 1 acre using MS-19 (= water quantity of the SWM regulations)!

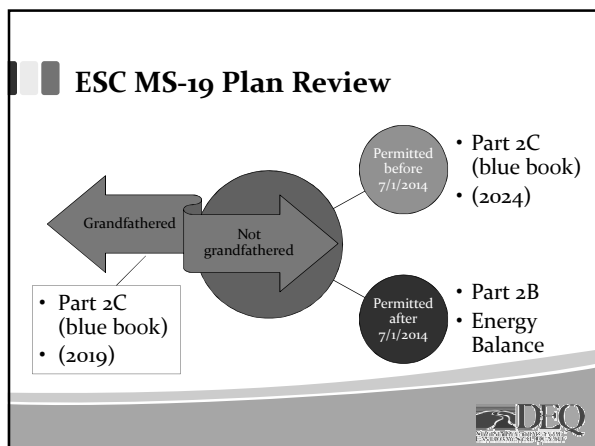


MS-19



10,000 sq.f. (2,500 sq.f.)	≥ 1 acre
Locally administered/enforced	Administered/enforced by locality or DEQ
MS19 = energy balance (IIB) or grandfathered & <7/1/2014 (IIC)	Energy balance (IIB) or grandfathered & <7/1/2014 (IIC)







Inspections

Question: Can a VSMP inspector inspect ESC?

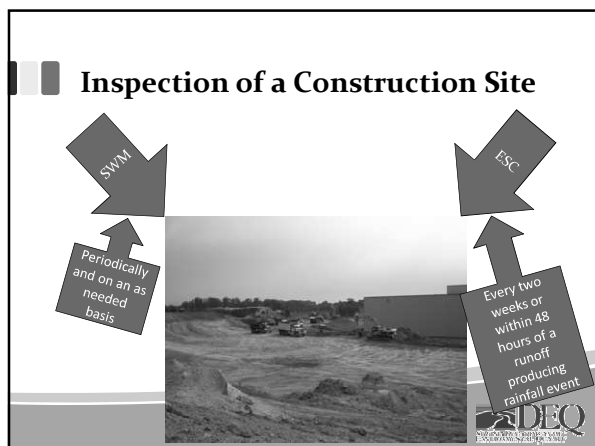
Answer: **Yes**

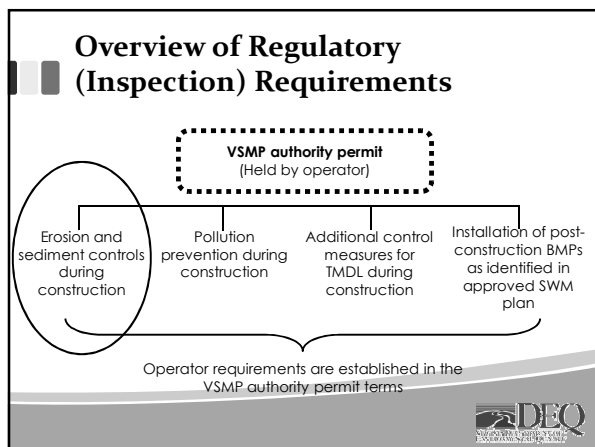
Question: Can an ESC inspector inspect VSMP measures?

Answer: **No**

ESC VSMP

DEQ





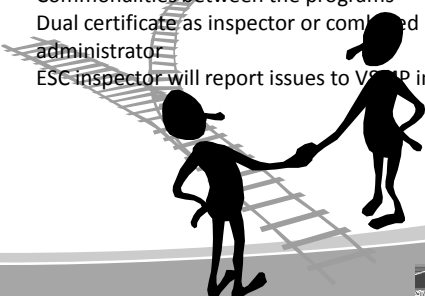
Construction Inspections

	Construction GP Regulation (9VAC25-880-70 Part II (F))	ESC Regulation (9VAC25-840-60)	VSMP Regulation (9VAC25-870-114)
Inspector	Designated by operator	VESCP authority	VSMP authority
Frequency	weekly	2 weeks/48 hrs of rainfall event	regularly
Inspection criteria	P2Plan	MS	SWPPP

DEQ

Compromise

- a. Commonalities between the programs
- b. Dual certificate as inspector or compliance administrator
- c. ESC inspector will report issues to VSMP inspector




Interaction with a VSMP inspector


What does a VSMP inspector look for?

- Compliance with ESC plan
- Compliance with SWMP
- Compliance with P2 Plan requirements
- Post construction maintenance

Installation and use according to approved plan





Interaction with a VSMP inspector



And the VESCP inspector can assist with/be aware of!

Content of a SWPPP

- 880-70 Part II – Stormwater Pollution Prevention Plan (SWPPP)
 - A.1. General information
 - A.2. Erosion and sediment control plan
 - A.3. Stormwater management Plan
 - A.4. Pollution Prevention Plan





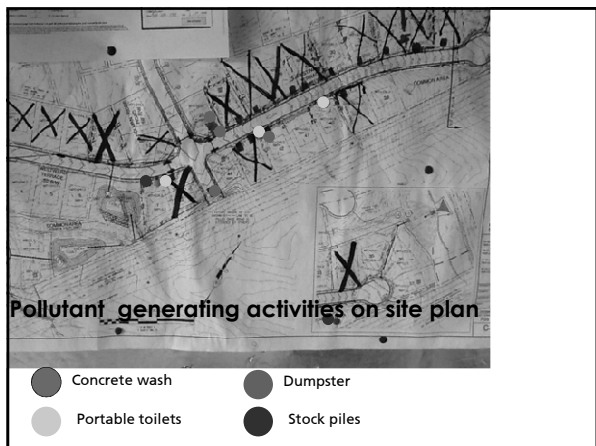
P2 Plan Let's get started!





Pollution Prevention Plan

- 880-70 Part II – Stormwater Pollution Prevention Plan (SWPPP)
 - A.4. Pollution prevention plan
 - a. Potential pollutants and their location
 - b. Describe location of potential pollutant-generating activities
(Can reference the site plan)









- P2 plan is dynamic, "living" document
- Potential pollutant sources/activities and P2 practices may change over time



Some VSMP authorities may require P2 plans to be submitted for review and approval







Pollution Prevention Plan

c. Identify all authorized non-stormwater discharges that will be commingled with stormwater discharges

Pollution Prevention Plan

d. Identify the person responsible for implementing the pollution prevention practice or practices for each pollutant-generating activity (If other than the person listed as the qualified personnel)



Pollution Prevention Plan

e. Describe pollution prevention practices and procedures that will be implemented to:

1. Prevent and respond to leaks, spills, and other releases

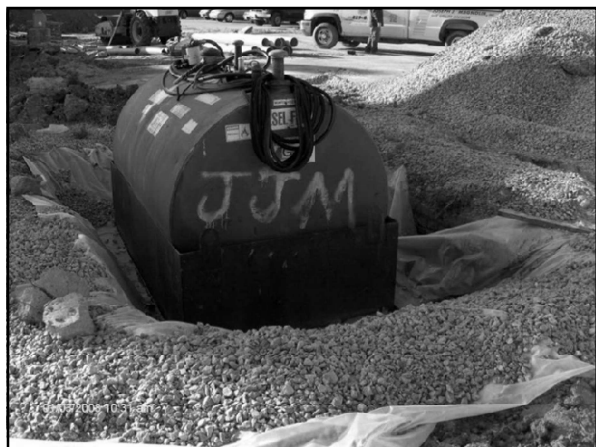



Pollution Prevention Plan

2. Prevent the discharge of spilled and leaked fuels and chemicals from vehicle fueling and maintenance activities












Pollution Prevention Plan


3. Prevent the discharge of soaps, solvents, detergents, and wash water from construction materials



Pollution Prevention Plan

- Minimize the discharge of pollutants from vehicle and equipment washing, wheel wash water, and other types of washing






Pollution Prevention Plan


Good housekeeping tips:

- ✓ Wash offsite at an appropriate facility
- ✓ Locate away from storm drain inlets, drainage facilities and waterways
- ✓ Use filtration and settling devices to remove sediments
- ✓ Direct wash waters to basins, traps or other suitable BMPs




Pollution Prevention Plan


★ Remember, no discharge of soaps, solvents or detergents!



Pollution Prevention Plan

- Direct concrete wash water into a leak-proof container or leak-proof settling basin






Pollution Prevention Plan

- ✓ No overflows
- ✓ Hardened concrete waste removed and properly disposed of
- ✓ Liquid concrete waste removed and properly disposed of

www.epa.gov/npdes/pubs/concretewashout.pdf



Pollution Prevention Plan

- Minimize the discharge of pollutants from storage, handling, and disposal of construction products, materials, and wastes





Pollution Prevention Plan

Construction Waste

Pollution Prevention Plan

7. Prevent the discharge of fuels, oils, and other petroleum products, hazardous or toxic wastes, and sanitary wastes

Pollution Prevention Plan

8. Address any other discharge from the potential pollutant-generating activities

Pollution Prevention Plan

- f. Describe procedures for providing pollution prevention awareness to personnel in order to comply with the conditions of the permit



Tell



Show



Do



P2 Overview Addressing P2 issues

More than one effective way?

- Use common sense
- Effectiveness realized through
 - Reduced stormwater pollution
 - Reduced downstream water quality issues

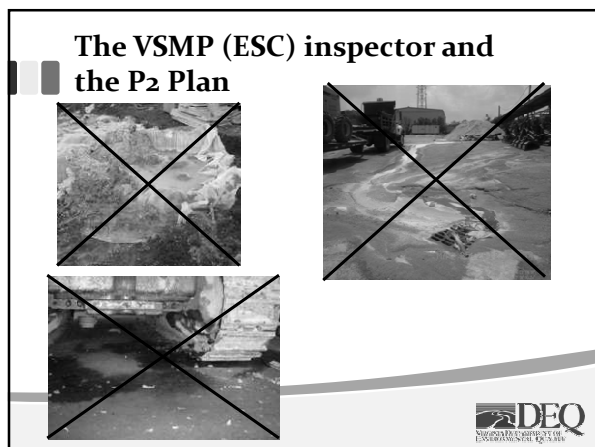


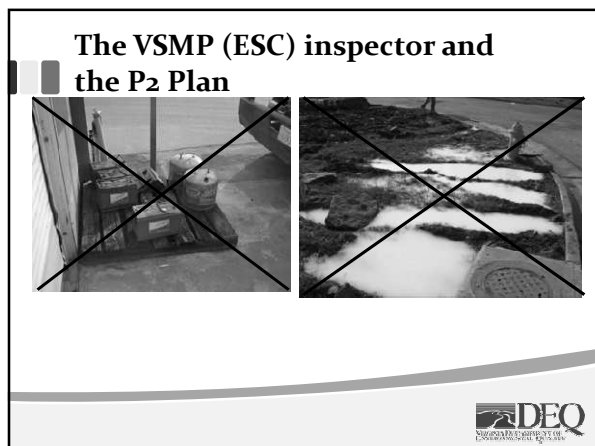
Basic, over-arching principles for good P2 planning?

- **Avoiding** generation of pollutants is best
- **Eliminating exposure** to stormwater is second best
- **Limits, controls, and treatment** are used to reduce potential for pollutant contamination
- **Controlling potential pollutants at source** is usually more effective and less costly









The VSMP (ESC) inspector and the P2 Plan

- 880-70 Part I – Discharge Authorization and Special Conditions

– E. **Authorized** nonstormwater discharges

- ✓ 1. Discharges from firefighting activities
- ✓ 2. Fire hydrant flushings
- ✓ 3. Waters used to wash vehicles or equipment **where soaps, solvents, or detergents have not been used and the wash water has been filtered, settled, or similarly treated prior to discharge**



The VSMP (ESC) inspector and the P2 Plan

Authorized Discharges:

- ✓ 4. Water used to control dust that has been filtered, settled, or similarly treated prior to discharge
- ✓ 5. Potable water sources, including uncontaminated waterline flushings
- ✓ 6. Routine external building wash down where soaps, solvents or detergents have not been used and the wash water has been filtered, settled, or similarly treated prior to discharge



The VSMP (ESC) inspector and the P2 Plan

Authorized Discharges:


- ✓ 7. Pavement wash waters ... where the wash water has been filtered, settled, or similarly treated prior to discharge
- ✓ 8. Uncontaminated air conditioning or compressor condensate
- ✓ 9. Uncontaminated ground water or spring water



The VSMP (ESC) inspector and the P2 Plan

Authorized Discharges:

- ✓ 10. Foundation or footing drains where flows are not contaminated with process materials such as solvents
Uncontaminated air conditioning or compressor condensate
- ✓ 11. Uncontaminated excavation dewatering, including dewatering of trenches and excavations that have been filtered, settled, or similarly treated prior to discharge
- ✓ 12. Landscape irrigation

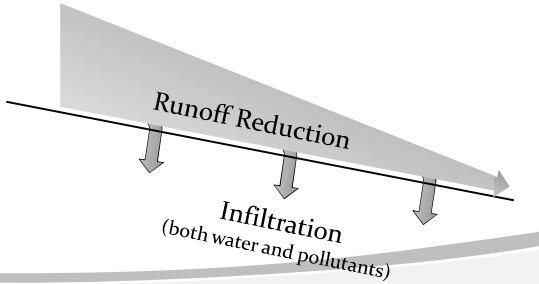



ESC SWM Interaction

Let's get started!




New Stormwater Paradigm




Soil Compaction






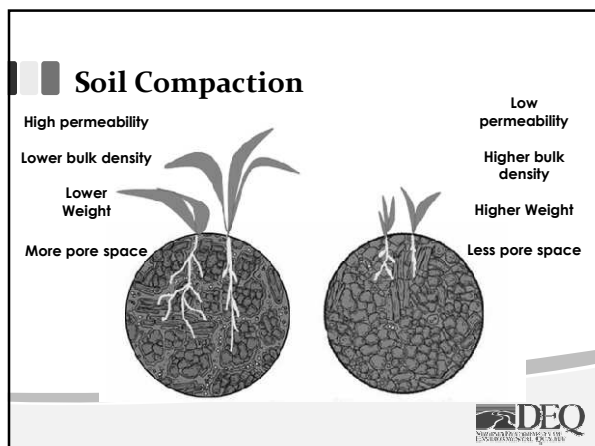

Soil Compaction

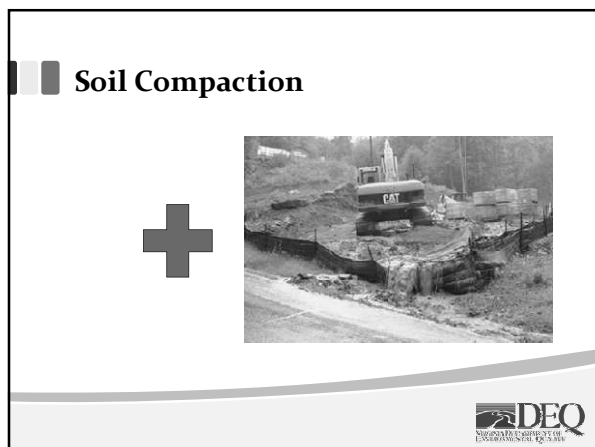
Normal Soil

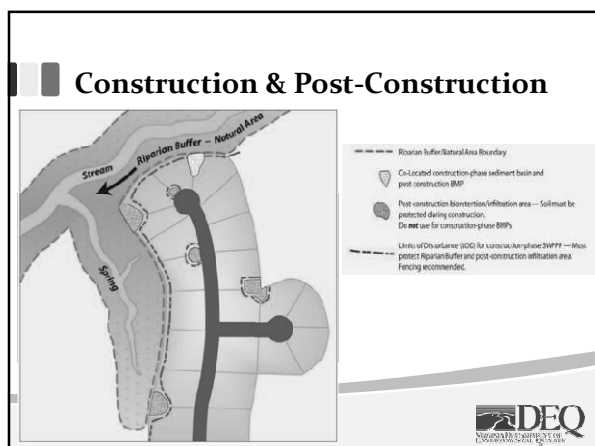


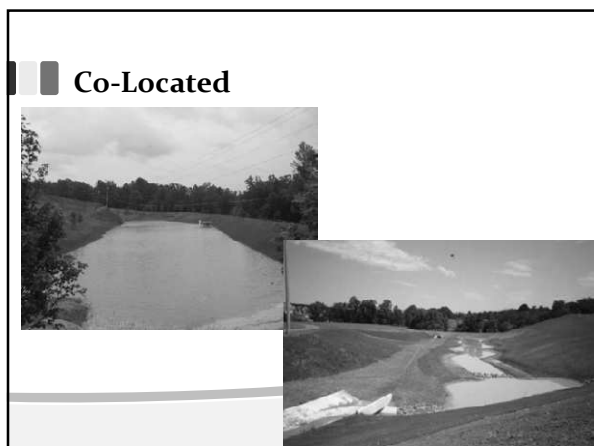
Water Air



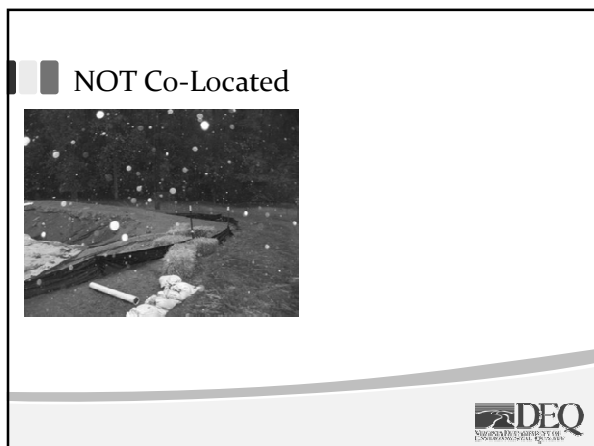















Other items an ESC inspector needs to look for!





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How Good Are the E&S Controls?



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Secondary E&S Measures



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Ready to Install? Construction Sequence




Make Sure Drainage Area is Stabilized. Block Inlets and/or Divert Water if Necessary





Installed too early during construction; fouled with construction sediment

Inlet blocked temporarily during bioretention installation



Projects With Multiple Phases?

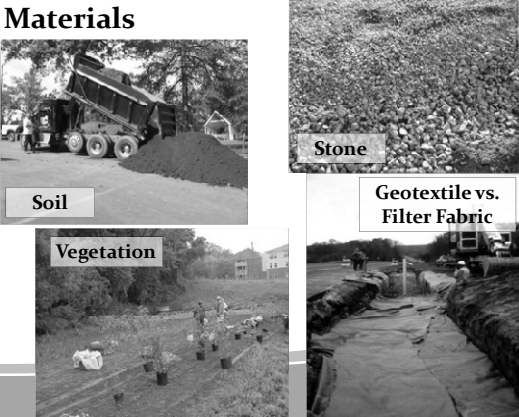
Materials

Soil

Vegetation

Stone

Geotextile vs. Filter Fabric




Field Modifications: Inspector vs. Engineer of Record



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Completion? Release Bond?



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